

Application Number 09/730,103

Responsive to Office Action mailed July 13, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A non-magnetic transducer for a data playback system in which the non-magnetic transducer senses variations in physical features of a patterned data storage medium, comprising:

a)——a temperature sensitive resistor mounted on the slider for a flying head application in which the slider flies over the patterned data storage medium such that the temperature sensitive resistor is positioned proximate the physical features of the patterned data storage medium; and

b)——a bias current path including the temperature sensitive resistor, wherein the transducer produces signals that represent data recorded in the patterned data storage medium.

Claim 2 (Currently amended): The transducer of claim 1, in which the temperature sensitive resistor comprises a thermistor including a semiconductor.

Claim 3 (Original): The transducer of claim 2, in which the thermistor comprises a material selected from the group consisting essentially of Co_2O_3 , Mn_2O_3 , NiO , and boron-doped diamond-like carbon.

Claim 4 (Currently amended): The transducer of claim 1, in which the temperature sensitive resistor comprises a resistance temperature detector including a metal.

Claim 5 (Original): The transducer of claim 4, in which the resistance temperature detector comprises a material selected from the group consisting essentially of nickel and platinum.

Claim 6 (Original): The transducer of claim 1, in which the transducer is a thin film structure.

Application Number 09/730,103

Responsive to Office Action mailed July 13, 2004

Claim 7 (Currently amended): The transducer of claim 1, further comprising leads that define the bias current path through the temperature sensitive resistor, in which the transducer and the leads are the same material.

Claim 8 (Original): The transducer of claim 1, in which the transducer is generally V-shaped.

Claim 9 (Original): The transducer of claim 1, further comprising a heating element in close proximity to the temperature sensitive resistor.

Claim 10 (Original): The transducer of claim 1, further comprising a protective coating layer on the bottom of the transducer.

Claim 11 (Original): The transducer of claim 1, in which the transducer defines a film plane, and the bias current path lies parallel to the film plane.

Claim 12 (Original): The transducer of claim 1, in which the transducer defines a film plane, and the bias current path lies perpendicular to the film plane.